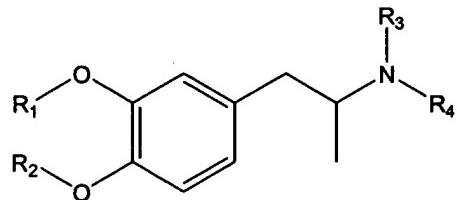


Claim Amendments

1. (previously presented) A compound of the formula:



Formula I

wherein: R<sup>1</sup> is H, lower alkyl or a protecting group,

R<sup>2</sup> is -(CH<sub>2</sub>)<sub>n</sub>C(O)R<sup>6</sup>,

R<sup>3</sup> and R<sup>4</sup> are independently H or lower alkyl or a protecting group,

R<sup>6</sup> is immunogenic carrier or label, and

n is an integer from 1 to 5,

and including acid salts thereof.

2. (original) A compound according to Claim 1 wherein said immunogenic carrier is a poly(amino acid).

3. (original) A compound according to Claim 2 wherein said poly(amino acid) is a protein.

4. (original) Antibodies raised against the compound of Claim 3.

5. (original) A compound according to Claim 1 wherein n is 1.

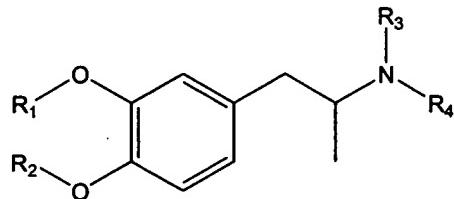
6. (previously presented) A compound according to Claim 1 wherein said label is an enzyme label, a luminescent label, or a radioisotope label.

Claims 7-12 (canceled).

13. (previously presented) A method for determining a compound selected from the group

consisting of 3,4-methylenedioxymphetamine (MDA), 3,4-methylenedioxymethamphetamine (MDMA), 3,4-methylenedioxymethylamphetamine (MDEA) and 4-hydroxy-3-methoxymethamphetamine (HMMA), said method comprising:

- (a) providing in combination in a medium:
  - (i) a sample suspected of containing said compound and
  - (ii) an antibody raised against a compound of the formula:

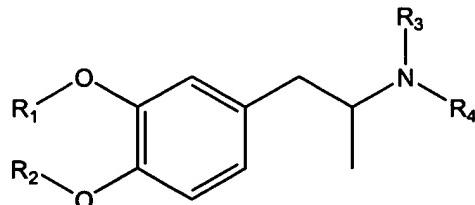


wherein:  $R^1$  is H or lower alkyl,  
 $R^2$  is  $-(CH_2)_nC(O)R^6$ ,  
 $R^3$  and  $R^4$  are independently H or lower alkyl,  
 $R^6$  is an immunogenic carrier, and  
 $n$  is an integer from 1 to 5, and

- (b) examining said medium for the presence a complex comprising said compound and said antibody, the presence thereof indicating the presence of said compound in said sample.

14. (original) A method according to Claim 13 wherein said combination further comprises:

- (iii) a label conjugate of the formula:



wherein:  $R^1$  is H, lower alkyl or is taken together with  $R^2$  to form a ring,  
 $R^2$  is H, lower alkyl,  $-(CH_2)_nC(O)R^6$  or  $-(CH_2)_nR^6$ , or is taken together with  $R^1$  to form a ring,  
 $R^3$  and  $R^4$  are independently H or lower alkyl, or, when  $R^1$  is taken together with  $R^2$  to form a ring, at least one of  $R^3$  or  $R^4$  is  $-(CH_2)_nC(O)R^5$  or  $-(CH_2)_nR^5$ , or when  $R^1$  is not

taken together with R<sup>2</sup> to form a ring, at least one of R<sup>1</sup> and R<sup>2</sup> is not H or lower alkyl,  
R<sup>5</sup> is a label,  
R<sup>6</sup> is a label, and  
n is an integer from 1 to 5, and

said examining comprises measuring signal from said label, the amount thereof being related to the presence of said compound in said sample.

15. (original) A method according to Claim 14 wherein said method is a homogeneous method and said medium is examined for the amount of said signal.

16. (original) A method according to Claim 14 wherein said method is a heterogeneous method and said complex, if present, is separated from said medium.

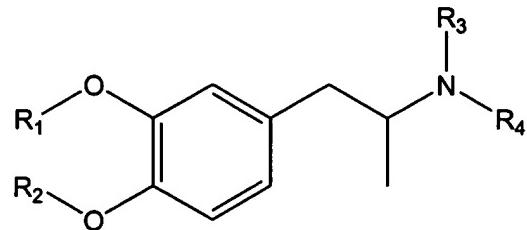
17. (original) A method according to Claim 14 wherein said protein is selected from the group consisting of KLH, BSA, BGG and ovalbumin.

18. (original) A method according to Claim 14 wherein n is 1.

19. (previously presented) A method according to Claim 15 wherein said label is an enzyme label, a luminescent label, or a radioisotope label.

20. (previously presented) A kit for determining a compound selected from the group consisting of 3,4-methylenedioxymphetamine (MDA), 3,4-methylenedioxymethamphetamine (MDMA), 3,4-methylenedioxymethylamphetamine (MDEA) and 4-hydroxy-3-methoxymethamphetamine (HMMA), said kit comprising:

(a) an antibody raised against a compound of the formula:



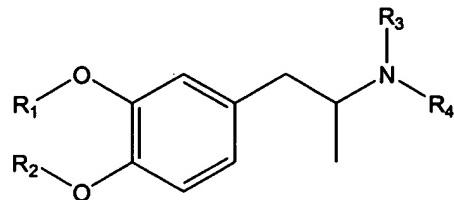
wherein:

- $R^1$  is H or lower alkyl,
- $R^2$  is  $-(CH_2)_nC(O)R^6$ ,
- $R^3$  and  $R^4$  are independently H or lower alkyl,
- $R^6$  is an immunogenic carrier, and
- n is an integer from 1 to 5, and

(b) ancillary reagents for determining said compound.

21. (previously presented) A kit for determining a compound selected from the group consisting of 3,4-methylenedioxymphetamine (MDA), 3,4-methylenedioxymethamphetamine (MDMA), 3,4-methylenedioxymethylamphetamine (MDEA) and 4-hydroxy-3-methoxymethamphetamine (HMMA), said kit comprising:

- (a) an antibody for said compound,
- (b) a label conjugate of the formula:



wherein:

- $R^1$  is H or lower alkyl,
- $R^2$  is  $-(CH_2)_nC(O)R^6$ ,
- $R^3$  and  $R^4$  are independently H or lower alkyl,
- $R^6$  is a label, and
- n is an integer from 1 to 5,

(c) ancillary reagents for determining said compound.

22. (original) A kit according to Claim 20 wherein said protein is selected from the group consisting of KLH, BSA, BGG and ovalbumin.

23. (original) A kit according to Claim 20 wherein n is 1.

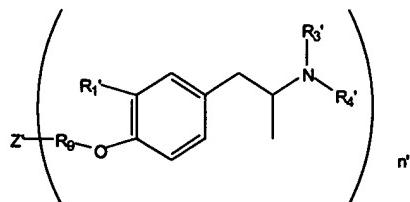
24. (previously presented) A kit according to Claim 21 wherein said label is an enzyme

label, a luminescent label, or a radioisotope label.

25. (currently amended) A method for determining methylene dioxyamphetamine and/or methylene dioxy methamphetamine and/or methylenedioxymethamphetamine in a sample suspected of containing methylenedioxymethamphetamine and/or methylenedioxymethamphetamine and/or methylenedioxymethamphetamine, said method comprising:

(a) providing in combination in a medium:

- (i) said sample,
- (ii) an antibody for methylenedioxymethamphetamine, and/or
- (iii) an antibody for methylenedioxymethamphetamine, and/or
- (iv) an antibody for methylenedioxymethamphetamine, and
- (v) a compound of the formula:



wherein:

R<sup>1'</sup> is H, or methyl or ethyl

R<sup>3'</sup> is H,

R<sup>4'</sup> is H, or methyl or ethyl,

R<sup>9</sup> is R<sup>9</sup>, is -(CH<sub>2</sub>)<sub>n</sub>C(O)R<sup>6</sup>,

R<sup>6</sup> is Z', which is an enzyme,

n is an integer from 1 to 5,

n' is an integer between 1 and the molecular weight of said enzyme divided by about 500; and

(b) examining said medium for the presence of a complex comprising said methylenedioxymethamphetamine and said antibody for methylenedioxymethamphetamine and/or a complex of said methylenedioxymethamphetamine and said antibody for methylenedioxymethamphetamine and/or a complex of said methylenedioxymethamphetamine and said antibody for methylenedioxymethamphetamine, the presence thereof indicating the presence of said methylenedioxymethamphetamine and/or methylenedioxymethamphetamine and/or

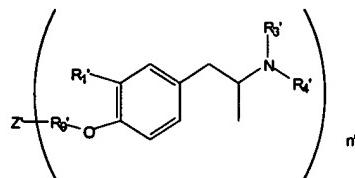
methylenedioxymethamphetamine in said sample.

Claim 26 (canceled).

27. (currently amended) A method for determining methylenedioxymethamphetamine and/or methylenedioxymethamphetamine and/or methylenedioxymethamphetamine in a sample suspected of containing methylenedioxymethamphetamine and/or methylenedioxymethamphetamine and/or methylenedioxymethamphetamine, said method comprising:

(a) providing in combination in a medium:

(i) said sample,  
 (ii) a conjugate of an enzyme and a methylenedioxymethamphetamine analog and/or a conjugate of an enzyme and a methylenedioxymethamphetamine analog and/or a conjugate of an enzyme and a methylenedioxymethamphetamine analog,  
 (iii) an antibody for methylenedioxymethamphetamine, said antibody being raised against a compound of the formula:



wherein:

R<sup>1</sup> is H, or methyl or ethyl

R<sup>3</sup> is H,

R<sup>4</sup> is H,

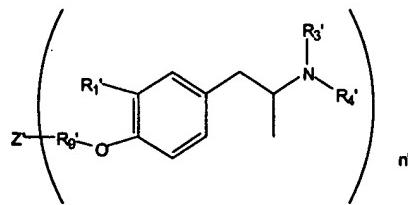
R<sup>9</sup> is -(CH<sub>2</sub>)<sub>n</sub>C(O)R<sup>6</sup>,

R<sup>6</sup> is Z', which is a protein immunogenic carrier or a non-poly(amino acid) immunogenic carrier,

n is an integer from 1 to 5,

n' is an integer between 1 and the molecular weight of said protein immunogenic carrier or said non-poly(amino acid) immunogenic carrier divided by about 500; and/or

(iv) an antibody for methylenedioxymethamphetamine, said antibody being raised against a compound of the formula:



wherein:

R<sup>1'</sup> is H, or methyl or ethyl

R<sup>3'</sup> is H,

R<sup>4'</sup> is methyl,

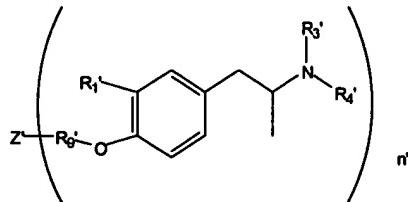
R<sup>9'</sup> is -(CH<sub>2</sub>)<sub>n</sub>C(O)R<sup>6'</sup>,

R<sup>6'</sup> is Z', which is a protein immunogenic carrier or a non-poly(amino acid) immunogenic carrier,

n is an integer from 1 to 5,

n' is an integer between 1 and the molecular weight of said protein immunogenic carrier or said non-poly(amino acid) immunogenic carrier divided by about 500; and/or

(v) an antibody for methylenedioxyethamphetamine, said antibody being raised against a compound of the formula:



wherein:

R<sup>1'</sup> is H, or methyl or ethyl

R<sup>3'</sup> is H,

R<sup>4'</sup> is ethyl,

R<sup>9'</sup> is -(CH<sub>2</sub>)<sub>n</sub>C(O)R<sup>6'</sup>,

R<sup>6'</sup> is Z', which is a protein immunogenic carrier or a non-poly(amino acid) immunogenic carrier,

n is an integer from 1 to 5,

n' is an integer between 1 and the molecular weight of said protein immunogenic carrier or said non-poly(amino acid) immunogenic carrier divided by about 500; and

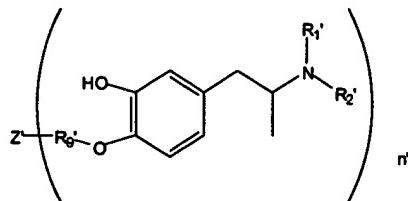
(b) examining said medium for the presence of a complex comprising said

methylenedioxymphetamine and said antibody for methylenedioxymphetamine and/or a complex of said methylenedioxymethamphetamine and said antibody for methylenedioxymethamphetamine and/or a complex of said methylenedioxymethamphetamine and said antibody for methylenedioxymethamphetamine, the presence thereof indicating the presence of said methylenedioxymphetamine and/or methylenedioxymethamphetamine and/or methylenedioxymethamphetamine in said sample.

Claims 28-29 (canceled).

30. (currently amended) A kit comprising in packaged combination:

- (i) an antibody for methylenedioxymphetamine,
- (ii) an antibody for methylenedioxymethamphetamine, and/or
- (iii) an antibody for methylenedioxymethamphetamine, and
- (iv) a compound of the formula:



wherein:

$R^1'$  is H,

$R^2'$  is H, or methyl or ethyl,

$R^9$  is  $-(CH_2)_nC(O)R^5$ ,

$R^5$  is  $Z'$ , which is an enzyme a protein immunogenic carrier or a non poly(amino acid) immunogenic carrier,

n is an integer from 1 to 5,

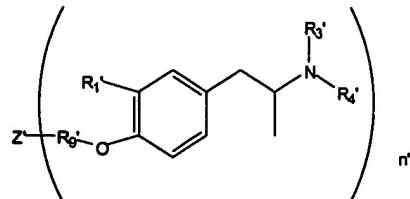
$n'$  is an integer between 1 and the molecular weight of said enzyme protein immunogenic carrier or said non poly(amino acid) immunogenic carrier divided by about 500.

31. (currently amended) A kit comprising in packaged combination:

- (i) a conjugate of an enzyme and a methylenedioxymphetamine analog and/or a conjugate of an enzyme and a methylenedioxymethamphetamine analog, and/or a

conjugate of an enzyme and a methylenedioxyamphetamine analog, and

(ii) an antibody for methylenedioxymethamphetamine, said antibody being raised against a compound of the formula:



wherein:

R<sup>1</sup> is H, or methyl or ethyl

R<sup>3</sup> is H,

R<sup>4</sup> is H,

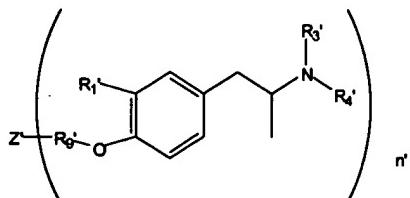
R<sup>9</sup> is -(CH<sub>2</sub>)<sub>n</sub>C(O)R<sup>6</sup>,

R<sup>6</sup> is Z', which is a protein immunogenic carrier or a non-poly(amino acid) immunogenic carrier,

n is an integer from 1 to 5.

n' is an integer between 1 and the molecular weight of said protein immunogenic carrier or said non-poly(amino acid) immunogenic carrier divided by about 500; and/or

(iii) an antibody for methylenedioxymethamphetamine, said antibody being raised against a compound of the formula:



wherein:

R<sup>1</sup> is H, or methyl or ethyl

R<sup>3</sup> is H,

R<sup>4</sup> is methyl,

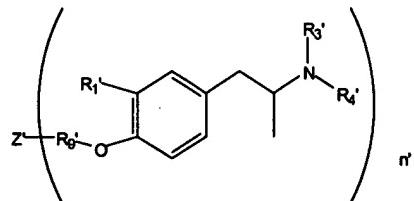
R<sup>9</sup> is -(CH<sub>2</sub>)<sub>n</sub>C(O)R<sup>6</sup>,

R<sup>6</sup> is Z', which is a protein immunogenic carrier or a non-poly(amino acid) immunogenic carrier,

n is an integer from 1 to 5,

n' is an integer between 1 and the molecular weight of said protein immunogenic carrier or said non-poly(amino acid) immunogenic carrier divided by about 500, and/or

(iv) an antibody for methylenedioxymethamphetamine, said antibody being raised against a compound of the formula:



wherein:

R<sup>1</sup> is H, or methyl or ethyl

R<sup>3</sup> is H,

R<sup>4</sup> is ethyl,

R<sup>9</sup> is -(CH<sub>2</sub>)<sub>n</sub>C(O)R<sup>6</sup>,

R<sup>6</sup> is Z', which is a protein immunogenic carrier in or a non-poly(amino acid) immunogenic carrier,

n is an integer from 1 to 5,

n' is an integer between 1 and the molecular weight of said protein immunogenic carrier or said non-poly(amino acid) immunogenic carrier divided by about 500.

Claim 32 (canceled).